

WaterSmart

Small-Scale Water Efficiency Projects for FY 2022

Funding Opportunity No. R22AS00195

Belle Fourche Irrigation District (BFID)

Sorenson 1.9 Lateral Pipeline

Newell, South Dakota



Belle Fourche Irrigation District

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Table of Contents

TECHNICAL PROPOSAL.....	3
EXECUTIVE SUMMARY-.....	3
Project Location	3
• <i>Project Map See Appendix A</i>	3
• <i>Project abstract Summary See Appendix B</i>	3
Figure 1. Sorenson Lateral	4
Technical Project Description	4
Evaluation Criterion A-Project Benefits	5
EVALUATION CRITERION B- Planning Efforts Supporting the Project	6
Evaluation Criterion C- Implementation and Results	7
Figure 1 • Milestone Summary	7
Evaluation Criterion D-Nexus to Reclamation	8
Evaluation Criterion E - Presidential and Department of the Interior Priorities	8
Sub-criterion No. E2. Disadvantaged or Underserved Communities:	9
Sub-criterion No. E.3. Tribal Benefits.....	11
Overlap or Duplication of Effort Statement:	11
Project Budget	11
Funding Plan and letters of funding commitment:.....	11
Budget Proposal:.....	11
• See Appendix C for a complete Budget	11
Table 1- Summary of Non-Federal and Federal Funding Sources.....	11
Table 2-Total Project Cost Table	12
Budget Narrative:.....	12
Environmental and Cultural Resources:.....	14
Required Permits or approvals	15
Letters of Support	15
Official Resolution.....	15
See Appendix D	15

TECHNICAL PROPOSAL

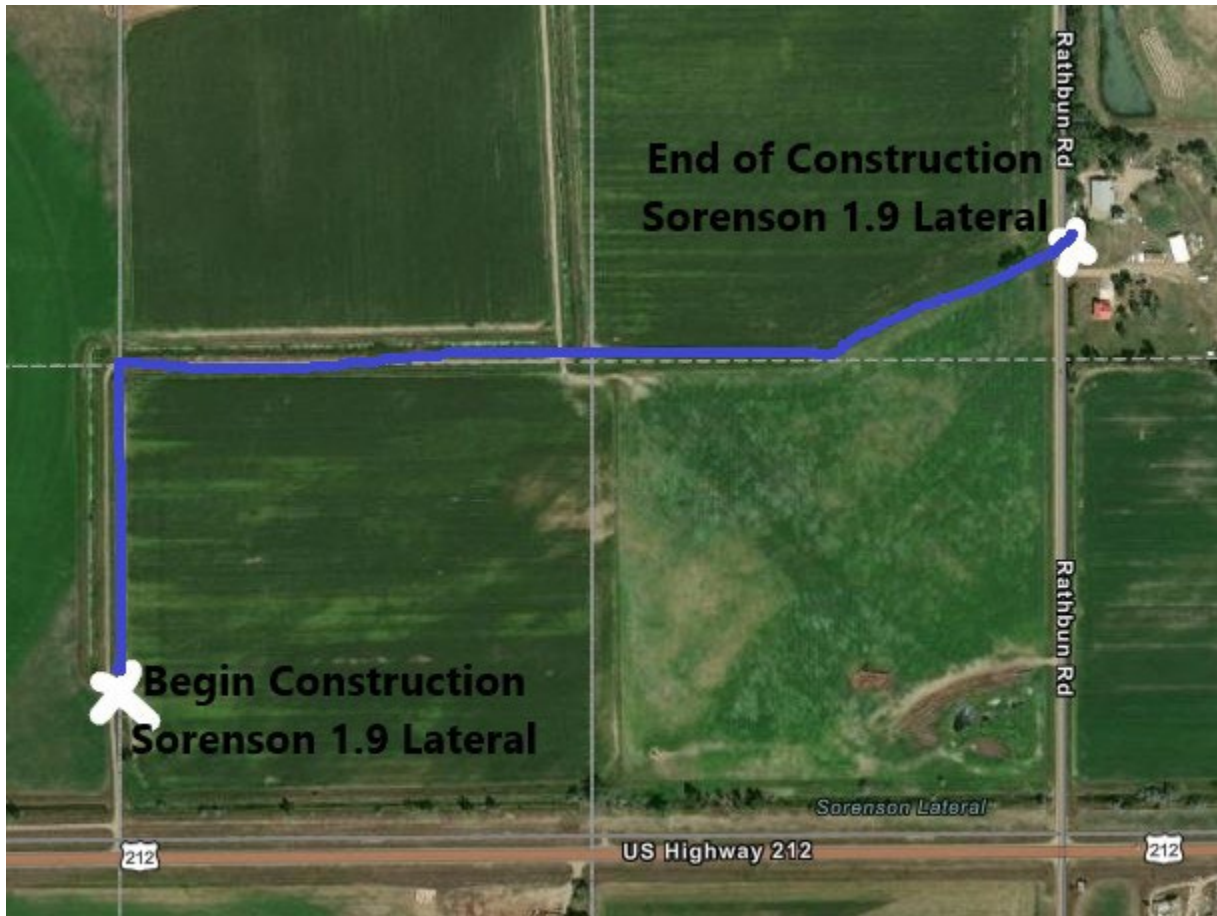
EXECUTIVE SUMMARY-

- April 21, 2022, the Belle Fourche Irrigation District (BFID) is located in Butte County, South Dakota with district offices in Newell, South Dakota.
- Belle Fourche Irrigation District is a category A applicant. The Belle Fourche Unit is a Reclamation Facility owned by the United States and operated and maintained by the Belle Fourche Irrigation District (BFID).
- The Belle Fourche Irrigation District (BFID), located in western South Dakota will install approximately 3600 feet of polyvinyl chloride pipe, farmer turnouts (FTO), and valves in an open, unlined, earthen Sorenson 1.9 Lateral. Upgrading this section of the project will create a water savings of approximately 360-acre feet per year. This project will provide a more efficient and reliable water conveyance system while improving future “on-farm” improvements.
- The project is scheduled to begin in October 2023 and be completed within approximately 23 days. Completion of the project is estimated to be in March 2025 in the event of any weather or technical delays.

Project Location

- The Belle Fourche Irrigation District is located in Butte County, South Dakota with district offices in Newell, South Dakota. This activity will take place on the Sorenson 1.9 Lateral located at 44° 40' 45.9768" N Latitude, -103° 32' 18.2076" W longitude approximately .64 miles from the nearest town of Nisland, South Dakota, and 7 miles from the town of Newell, South Dakota.
- *Project Map See Appendix A*
- *Project abstract Summary See Appendix B*

Figure 1. Sorenson Lateral



Technical Project Description

BFID will service all equipment and ready all employees with safety and training before the start of the project. Any and all safety equipment will be supplied for all employees. Once funding is available all the pipe and appurtenances will be ordered and ready for construction beginning date of October 2023, once irrigation water is shut off for the season. Design drawing, NEPA, SHPO, and ROW have all been acquired. BFID will begin hauling pipe and equipment to the site and mobilizing. Operators will then shoot the ditch for grade and install approximately 3600-feet of underground pipeline in an existing 3600-foot earthen, unlined lateral. We will begin construction with an 18-inch polyvinyl chloride pipe for approximately 1800 feet and continue to install approximately 1800 feet of 15-inch polyvinyl chloride pipe. BFID will install measuring devices and valves in two places on the new pipeline. Once all the pipe is laid and buried, BFID will demobilize, reclaim and clean the construction area, and repair the O&M road.

Evaluation Criterion A-Project Benefits

Benefits to Category A Applicant's Water Delivery System: *Describe the expected benefits to the Category A applicant's water delivery system. Address the following:*

- **Clearly Explain the anticipated water management benefits to the Category A applicant's water supply delivery system and water customers.** The anticipated benefits to the district would be a water savings of approximately 360-acre feet per year. This project will also assist the landowner by making the area around the open ditch productive.
- **Explain the significance of the anticipated water management benefits for the Category A applicant's water delivery system and customers. Consider:**
 - ***Are customers not currently getting their full water right at certain times of the year?*** At certain times of the year, downstream water users are not allowed water if the upstream landowners are cutting their fields. The water is turned on and off all summer, and the landowners downstream are required to plan irrigation times around the neighbors' cutting times. The ditch riders are also walking this ditch every time it is turned on to prevent flooding out fields due to debris in the lateral.
 - ***Does this project have the potential to prevent lawsuits or water calls?*** Yes, piping this lateral will reduce the number of possible insurance claims. Sorenson 1.9 Lateral seeps and overflows often flood adjacent fields and county roads.
 - ***What are the consequences of not making the improvement?*** If we fail to make this improvement the insurance claims will become an issue. This is impacting the landowner's ability to receive funding for on-farm improvements as the ability to deliver water is conditional. By creating a closed water conveyance system, we are eliminating seepage, flooding, and evaporation.
 - ***Are customer water restrictions currently required?*** Yes. At this time the landowners are required to plan all irrigation actions together. They must take turns and be considerate of the landowners not disagree over water usage.
 - ***Other Significant concerns that support the need for the project.*** At this time our landowners have been cordial. We now have new landowners. We would like to repair this issue so they may do on-farm improvements and receive funding from NRCS.

Broader Benefits: *Describe the broader benefits that are expected to occur as a result of the project. Consider:*

Will the project improve broader water supply reliability at a sub-basin or basin scale? Yes, we will be saving approximately 360 acre-feet of water per year for the Pick-Sloan Missouri Basin.

- **Will the proposed project increase collaboration and information sharing among water managers in the regions? Please explain.** At this time, we communicate with other irrigation projects near us. We share information as needed or requested by other Districts and projects.
- **Will the proposed project positively impact/benefit various sectors and economies within the applicable geographic area? (e.g., impacts to the agriculture, environment, recreation, and tourism)? Please explain.** By saving water we will leave water in the dam for recreation. Also, by piping this Lateral we will be allowing the landowners to irrigate as needed and not have to worry about waiting or drowning out the neighbors.
- **Will the project complement work being done in coordination with NRCS in the area (e.g., the area with a direct connection to the District's water supply)? Please explain.** Yes, once this is piped the landowner will apply for funding from NRCS-RCPP (Regional Conservation Partnership Program) grant. They will install a pivot or two and a private pipeline off the Districts Sorenson 1.9 Lateral. This will be a direct connect to the Sorenson 1.9 Lateral.
- **Will the project help address drought conditions at the sub-basin or basin scale? Please explain.** The Belle Fourche Irrigation District is part of the Missouri Basin Pick-Sloan Plan. This project and others like it increase the conservation in our area. The Missouri basin is very dry so all efforts to conserve are appreciated.

EVALUATION CRITERION B- Planning Efforts Supporting the Project

Plan Development: *Describe how your project is supported by an existing planning effort.*

Identify the planning effort and who developed it. If the planning effort was not developed by the Category A applicant, describe the Category A applicant's involvement in developing the planning effort. Pick-Sloan Missouri Basin Program was established in 1944, this is when Belle Fourche Irrigation District (BFID) began flood control and other conservation efforts. Today (BFID) is working in conjunction with the Bureau of Reclamation and the Department of Agriculture and Natural Resources (DANR) in maintaining a water conservation effort. We are active with the local Watershed groups, Natural Resources Conservation Services (NRCS), and the Belle Fourche River Compact. At this time our effort is to upgrade the BFID infrastructure and improve water delivery by piping open Laterals and ditches. This planning effort was devised in the 1980s when the Bureau of Reclamation created a Rehabilitation and Betterment Program. This began our plan of upgrading and improving water storage to prepare for droughts. We encourage and support the installation of all pivots and private pipelines and on-farm improvements to conserve water.

Support for the Project: *Describe to what extent the proposed project is supported by the identified plan. Address the following:*

- **Is the project identified specifically in the planning effort?** Yes, the BFID is a historic district with many open ditches and laterals. Our goal is to pipe the ditches and laterals that have lost integrity.
- **Explain whether the proposed project implements a goal or addresses a need or problem identified in the existing planning effort?** If an earthen ditch or lateral loses or lost its integrity, our policy is to try and pipe the earthen ditch or lateral to avoid transmission losses, transpiration, and waste. Sorenson 1.9 Lateral wastes approximately 360-acre feet of water per year. For a small project in a dry year that is an astronomical amount of water. This does not include the amount of water wasted if the BFID staff doesn't stay on task and monitor the open ditch carefully.

Explain how the proposed project has been determined as a priority in the existing planning effort as opposed to other potential projects/ measures. BFID has a priority list of Laterals and the Sorenson 1.9 has been on it for several years. This past season it was a huge issue with the seepage as the farm equipment got stuck and the adjacent landowners were delayed water as we were unable to accommodate them with all the issues upstream.

Evaluation Criterion C- Implementation and Results

- **Describe the implementation plan for the proposed project. Please include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates.** BFID will provide an in-kind match consisting of equipment hours and man-hours. BFID also intends on paying for gravel, pipe bedding, valves, and other contingencies. It is assumed to take approximately twenty-three days to complete this project weather permitting. Two days to mobilize the equipment and haul the polyvinyl chloride pipe and appurtenances to the Sorenson 1.9 Lateral. BFID will install approximately 200 feet of pipe and appurtenances per day for approximately eighteen days. Demobilization will take approximately three days to clean up, remove all equipment and debris, reclaim the ground and repair the operation and maintenance road. BFID is confident this can be accomplished in the time allotted.

Figure 1 • Milestone Summary

Complete environmental and cultural compliance	05/01/2021	03/31/2023
Procure Materials and Mobilize	05/01/2023	10/06/2023
Excavation and installation of pipe	10/09/2023	11/01/2023
Installation of valves, valve wells, and measuring devices	10/09/2023	04/01/2024
Demobilize and reclaim the area	11/07/2023	03/31/2024
Project closeout and submit a final report	03/31/2024	03/31/2025

- **Describe any permits that will be required, along with the process for obtaining such permits.** BFID has already completed the National Environmental Policy Act (NEPA) and State Historic Preservation Office (SHPO) requirements for this project. Also, the Right of

Way (ROW) was obtained previously. The Bureau of Reclamation has approved this project. All permits are obtained.

- **Identify and describe any engineering or design work performed specifically in support of the proposed project.** The BFID had one of our qualified employees design the pipeline. The Bureau of Reclamation then approved the design for the Sorenson 1.9 Lateral.
- **Describe any new policies or administrative actions required to implement the project.** The BFID is required to track all work done on these projects. The Board of Directors has approved any administrative work necessary to maintain accurate records. No new policies were made.
- **Describe the timeline for completion of environmental and cultural resource compliance. Was the timeline for completion of environmental and cultural resource compliance discussed with the local Reclamation office?** BFID started the environmental and cultural resources for this project, local Reclamation has approved this project.

Evaluation Criterion D-Nexus to Reclamation

- **Is the proposed project connected to a Reclamation project or activity? If so, how? Please consider the following:**
 - *Does the applicant receive Reclamation project water?* BFID is a Reclamation project. BFID receives Reclamation water.
 - *Is the project on Reclamation project lands or involving Reclamation facilities?* Yes, BFID was the second project undertaken by Reclamation. With the passing of the Reclamation Act of 1902 construction of our dam began in 1906. The Belle Valley Water Users' Association negotiated a repayment plan with the Federal Government. BFID is still paying annually on this agreement.
 - *Is the project in the same basin as a Reclamation project or activity?* Yes, BFID is a Reclamation Facility. It is in the Pick-Sloan Missouri Basin Program.
 - *Will the proposed work contribute water to a basin where a Reclamation project is located?* Yes, any water conservation efforts made by the BFID indirectly affect the Basins. The Belle Fourche River Basin is a small portion of the Cheyenne River Basin and they are both a big part of the Pick-Sloan Missouri River Basin Program.

Evaluation Criterion E - Presidential and Department of the Interior Priorities

Sub-criterion No. E1. Climate Change: *Points will be awarded based on the extent the project will reduce climate pollution; increase resilience to the impacts of climate change; protect public health; and conserve our lands, waters, oceans, and biodiversity. Address the following as relevant to your project.*

- **Combating the Climate Crisis: E.O. 14008: Tackling the Climate Crisis at Home and Abroad, focuses on increasing resilience to climate change and supporting climate-resilient development. For additional information on the impacts of climate change throughout the western United States, see: <https://www.usbr.gov/climate/>**

secure/docs/2021secure/2021SECUREREport.pdf. Please describe how the project will address climate change, including the following:

- **Please provide specific details and examples on how the project will address the impacts of climate change and help combat the climate crisis.** By piping the Sorenson 1.9 Lateral we will be conserving approximately 360 acre-feet of water. Our dam is only able to hold 172,800 acre-feet of water, for 57,183 acres, when the dam is full. With the climate sometimes our dam fails to fill this year it is at 143,306 acre-feet all conservation practices are needed. Upgrading our project and keeping enough water in the dam for future use as well as leaving enough space for flood control is a difficult task. We keep a record of the weather and work with USGS and BOR and do instrumentation monthly to keep records of monthly readings. This data assists our Dam tender/ Watermaster in knowing how much water to release and how much to conserve. His data includes projects the district finds important and he implements the data into his management of the dam.
- **Does this proposed project strengthen water supply sustainability to increase resilience to climate change?** Piping the Sorenson 1.9 Lateral strengthens our water supply and assists the District in becoming more resilient to climate change.
- **Does the proposed project contribute to climate change resiliency in other ways not described above?** Sorenson 1.9 Lateral piping contributes to resiliency to climate change also by helping the District store the water in the conveyance system until needed vs. wasting it until used or needed. Open, earthen, unlined laterals and ditches are becoming foregone or obsolete. The ever-changing climate has made our ways of thinking more resilient.

Sub-criterion No. E2. Disadvantaged or Underserved Communities: *Points will be awarded based on the extent to which the Project serves economically disadvantaged or underserved communities in rural or urban areas.*

- **Will the proposed project serve or benefit a disadvantaged or historically underserved community? Benefits can include but are not limited to, public health and safety by addressing water quality, new water supplies, or economic growth opportunities.** This project will affect a disadvantaged or historically underserved community. Belle Fourche Reservoir keeps the community going. Without it, there would be no water, no crops, and people would not stay in the area.
- **Please describe in detail how the community is disadvantaged based on a combination of variables that may include the following:**
 - ***Low income, high and/or persistent poverty:*** The area of the District is predominately elderly and people on fixed incomes. Without the ability to grow a crop or feed the animals they would certainly not be able to sustain the land.
 - ***High unemployment and underemployment:*** Many People living in this area are employed but underemployment in this area is a huge problem.

- ***Racial and ethnic residential segregation, particularly where the segregation stems from discrimination by government entities:*** Not Applicable
- ***Linguistic isolation:*** This does not seem to be an issue.
- ***High housing cost burden and substandard housing:*** Over the last two years the cost of living here has increased by over 50%. Housing has gone up and the value of land has as well. Many people are burdened with substandard housing as they cannot afford to repair or replace it.
- ***Distressed neighborhoods:*** The neighborhoods have many abandoned houses and land. Landowners have not been able to maintain the property and have been forced out.
- ***High transportation cost burden and/or low transportation access:*** With the price of transportation increasing many elderly and low-income families do not make it to the doctor or grocery stores. This is forcing people to move to bigger cities.
- ***Disproportionate environmental stressor burden and high cumulative impacts:*** Cumulative exposures to environmental stressors in this vulnerable area can result in inflated health risks and impacts the population of the District.
- ***Limited water and sanitation access and affordability:*** We have municipal water in this area; the only time water is limited is in dry or drought-like conditions. Sanitation access has been an issue; many people in this area have dumps on private property to avoid paying the fees for sanitation. Garbage is always blowing, and the Sorenson 1.9 Lateral is always full of trash.
- ***Disproportionate impacts from climate change:*** With climate change, the storms and heatwaves in this area are creating great concern. Large hail and damaging winds are constantly threatening our crops. Climate change in this area is causing concerns as we cannot produce crops.
- ***High energy cost burden and low energy access:*** This is not an issue in our area.
- ***Jobs lost through energy transition:*** Even though people lost jobs in the energy transition, there are many more jobs available. People in this area are resilient and have overcome this.
- ***Access to healthcare:*** Healthcare in this area is expensive. Many people avoid the doctors here as they charge late fees and interest if you cannot pay. Many people are sick and there is no help in this area.

If the proposed project is providing benefits to an underserved community, provide sufficient information to demonstrate that the community meets the underserved definition in E.O. 13985, which includes populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life. Perhaps in larger areas of South Dakota, this may be an issue but in this small area of Butte County diversity doesn't appear to be an issue.

Sub-criterion No. E.3. Tribal Benefits

Points will be awarded based on the extent to which the Project will honor the Federal government’s commitments to Tribal Nations.

- **Does the proposed project directly serve and/or benefit a tribe? Will the project improve water management for a tribe?** This project will serve the Cheyenne River Sioux Tribe by allowing the BFID to conserve more water available for the Cheyenne River.
- **Does the proposed project support tribal resilience to climate change and drought impacts or provide other tribal benefits such as improved public health and safety by addressing water quality, new water supplies, or economic growth opportunities?** At this time, I am uncertain of these aspects about our project.

Overlap or Duplication of Effort Statement:

- At this time this application does not overlap between the proposed project and any other active or anticipated proposals or projects in terms of activities, costs, or commitment of key personnel.
- This project was submitted for the RCPP (Regional Conservation Partnership Program, however; funding is not going to be available for a few years, so we have asked to remove this project from the RCPP grant list. If funding is made available and it is duplicative, I agree to contact NOFO point of contact immediately as well as my GOTR (Grants Officer Technical Representative).

Project Budget

Funding Plan and letters of funding commitment:

Budget Proposal:

- See Appendix C for a complete Budget

Table 1- Summary of Non-Federal and Federal Funding Sources

FUNDING SOURCES	Amount
Non-Federal Entities	
1. In-Kind Contributions *	*\$83,089.91
2. District Paid Supplies and Contingencies	\$16,896.25
Non-Federal Subtotal	\$99,896.16
Requested Reclamation Funding	\$99,451.83

Table 2-Total Project Cost Table

SOURCE	AMOUNT
Costs to be reimbursed with the requested Federal funding	\$99,986.16
Costs to be paid by the BFID	\$16,896.25
BFID In-Kind Match	\$83,089.91
TOTAL PROJECT COST	\$199,437.99

Budget Narrative:

- The in-kind match BFID will provide will be equipment and man-hours it is assumed to take 23 days to complete this project. Two days to mobilize the equipment and haul PVC pipe and supplies to the Sorenson 1.9 Lateral. Demobilization will take three days to clean up, remove all equipment and debris, and repair the road. All labor and fringe benefits listed in this proposal are based on actual wages and fringe benefits as of April 27, 2022. Labor and fringe benefits are approximately \$35,773.94 and are spent as follows:
- **Project Manager:** Will be allotted 5 hours to take pictures and document progress and also to oversee the foreman and office administration. He will also correspond with the Bureau of Reclamation as needed.
- **Project Foreman:** On location, the duration of the job to oversee all work is done accurately and safely this is a total of 160 hours at his current rate of pay with fringe benefits to total \$4,875.20. Foreman is hands-on and assists the crew as well. He is responsible for the project and tracking all work done.
- **Office Manager/ Administration:** Approximately 25 hours estimated for the Administration, \$602.25 to document all hours, receipts, equipment usage, and to file all quarterly reports promptly.
- **Operators:** Utilized daily to operate the equipment they will be on location 176 to 184-man hours each for a combined total of \$14,611.84. Operators will shoot the ditch for the grade, lay approximately 200 feet of pipe per day, and install the valves, measuring devices, and valve wells in approximately 18 days.
- **Truck drivers:** Haul all equipment, pipe, machinery, etc. needed to the location, they will also drive the dump trucks to haul the bedding for the pipeline. The truck drivers may also be used to install the pipe in the trench, the estimated usage for two men is 176 hours for one and 120 hours for the second, for a

combined total of \$7,462.00. Our employees are cross-trained and these have CDLs.

- **Laborers:** Used to lay pipe, keep the area clean and safe, assist the foreman and operators as needed, estimated costs for these employees are \$17,877.52. These employees are used in the trench to compact the soil with the roller packer also they clean and glue the pipe together and do all tasks the foreman assigns them. They will help the operators with mobilization and demobilization.
- *BFID used the United States Army Corps of Engineers (USACE) ownership and operating schedule to figure out the equipment hours and adjusted them to our equipment.*
- **Case backhoe**-160 hours @ \$36.41 to backfill, move earth, and haul pipe, on location for a total of \$5,825.60.
- **Case skid steer**-80 hours @ \$21.37 used to load pipe backfill, and disperse the pipe bedding for a total of \$1,709.60.
- **Caterpillar excavator**-168 hours @ \$58.54 used to dig pipeline and valve wells-\$9,834.72.
- **Allis Chalmers fork-lift** will be used in conjunction with the skid steer to load pipe in the staging area for 48 hours- \$945.60.
- **Semi-trucks**- will be used to haul all equipment and pipe to the location estimated usage is 32 hours each for a total of \$3,438.72.
- **Dump Trucks**- BFID estimates the time to haul pipe bedding and gravel from District Headquarters to location as 48 hours per truck combined total-\$4,864.32.
- **Caterpillar D6 dozer**-160 hours @ \$51.44 used to move earth-\$8,230.40.
- **Roller Packer**- will be used to pack the bedding we will be renting it for 184 hours for \$2,185.92.
- BFID will provide the gravel, pipe bedding, valves, and other contingencies with cash of \$16,896.25. These contingencies are based on possible cost increases for labor and supplies.
District total in-kind and monetary match of \$99,986.16. All of these funds will be contributed by assessment income and savings accounts. All wages, fringe benefits, appurtenances, pipe, and supplies cost area based on costs as of today April 27, 2022.
- The Federal funding portion of this project is to purchase the necessary supplies that will be needed. The 18" PVC pipe is priced at \$30.12 per foot and 1800 feet are needed for a cost of \$54,216.00, the 15" PVC pipe is priced at \$20.83 per foot and, 1800 feet are needed for a cost of \$37,494.00. The elbows, tees, tapers, air vents, other appurtenances, and contingencies will cost approximately \$4741.83.
- Federal funds will also pay \$3,000.00 for NEPA, NHPO, ESA, etc. The total Federal funds requested at this time for the funding opportunity are \$99,451.83. The cost of the pipe and appurtenances is based on the price as of April 27, 2022.

Environmental and Cultural Resources:

- *Will the proposed project impact the surrounding environment (e.g., soil [dust], air, water [quality and quantity], animal habitat)? Please briefly describe all earth-disturbing work and any work that will affect the air, water, or animal habitat in the project area. Please also explain the impacts of such work on the surrounding environment and any steps that could be taken to minimize the impacts.* The ground will be excavated, and the earth moved from an existing open lateral; the pipe will be placed into the lateral it will be bedded and backfilled. BFID intends to reclaim the land and repair the road, this will cause the soil to create dust, but it should be minimal as we will work in the fall and winter months to not affect the quality of the air in a manner unsuitable to the neighborhood. BFID plans to work in the fall to early winter to prevent any massive impact on the animals, air, soil, or water.
- *Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area? If so, would they be affected by any activities associated with the proposed project?* For example, the Northern Long-Eared Bat is suspected of reside in Western South Dakota wooded areas. They are on the Federal Endangered Species list. Therefore, according to the Bureau of Reclamation, we are to do no work from March 1 to October 31. We do not intend to remove any trees, but just in case, our work would then begin after October 31 when they move on and hibernate.
- *Are there wetlands or other surface waters inside the project boundaries that potentially fall under Clean Water Act (CWA) jurisdiction as "Waters of the United States?" If so, please describe and estimate any impacts the proposed project may have.* This is not applicable to our project as there are no wetlands in this location.
- *When was the water delivery system constructed?* The Belle Fourche Project was authorized by the Secretary of the Interior for construction on May 10, 1904. Surveys for the project began in 1903. The Bureau of Reclamation (Reclamation) then U.S. Reclamation Service began construction of the facilities on about 12,000 acres. The original project was completed in 1914. In 1949 the operation and maintenance responsibilities were transferred from Reclamation to the Belle Fourche Irrigation District (BFID). In 1985 the most recent rehabilitation and betterment (R&B) of the district facilities was done and through the authorization of the R&B the Belle Fourche Project became the Belle Fourche Unit as it was moved to fall under the Pick-Sloan Missouri Basin Plan
- *Will the proposed project result in any modification of or effects to, individual features of an irrigation system (e.g., head gates, canals, or flumes)? If so, state when those features were constructed and describe the nature and timing of any extensive alterations or modifications to those features completed previously.* This Lateral comes off the Sorenson Lateral which has lost integrity; therefore, the Sorenson 1.9 Lateral has lost integrity. This work area will not result in any modifications to the original system. There

are no features that will be affected. BFID has submitted paperwork to the Bureau of Reclamation and has been approved by NEPA and SHPO.

- ***Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? A cultural resources specialist at your local Reclamation office or State Historic Preservation Office can assist in answering this question.*** The Belle Fourche Irrigation District is a historic district eligible for listing on the National Register of Historic Places. The District was determined eligible under Criterion A, at the state and local level, for the National Register on August 25, 2002 (SHPO File #020716005F). The District's period of significance is 1904 to 1949. Individual waterways are either contributing or non-contributing to the historic integrity of the District. In consultation with the South Dakota State Historic Preservation Officer (SHPO) in 2002, it was determined that for a lateral to retain integrity at least fifty percent of the lateral's length continue to exist in its original alignment, and not be placed in pipe. In addition, at least fifty percent of the historic structures associated with the lateral must remain, and retain integrity. The Sorenson Lateral is not a contributing feature, therefore; Sorenson 1.9 sub-Lateral also has lost integrity and is now considered non-contributing.
- ***Are there any known archeological sites in the proposed project area?*** At this time the BFID sees no archeological items located at this site. Reclamation's archaeologist has completed the cultural survey in the project work zone and BFID is approved to proceed.
- ***Will the proposed project have a disproportionately high and adverse effect on low income or minority populations?*** No, this project should not affect the population.
- ***Will the proposed project limit access to, and ceremonial use of, Indian sacred sites or result in other impacts on tribal lands?*** No
- ***Will the proposed project contribute to the introduction, continued existence, or spread of the noxious weeds or non-native invasive species known to occur in the area?*** No, this project should reduce the existence and spread of the noxious weeds and invasive species.

Required Permits or approvals

Letters of Support

BFID will follow up with the Bureau of Reclamation for a letter.

Official Resolution

See Appendix D

BUDGET ITEM DESCRIPTION	COMPUTATION		Quantity Type	TOTAL COST
	\$/Unit	Quantity		
Salaries and Wages				\$35,773.94
Manager	\$ 26.52	5.0	hours	\$ 132.60
Foreman	\$ 24.06	160.0	hours	\$ 3,849.60
Administration	\$ 18.26	25.0	hours	\$ 456.50
Operator 1	\$ 22.99	184.0	hours	\$ 4,230.16
Operator 2	\$ 20.85	176.0	hours	\$ 3,669.60
Operator 3	\$ 19.50	176.0	hours	\$ 3,432.00
Truck Driver	\$ 21.23	176.0	hours	\$ 3,736.48
Truck Driver 2	\$ 20.00	120.0	hours	\$ 2,400.00
Labor (pipe Layer)	\$ 18.00	184.0	hours	\$ 3,312.00
Labor (pipe Layer)	\$ 18.00	144.0	hours	\$ 2,592.00
Laborer	\$ 17.45	140.0	hours	\$ 2,443.00
Laborer	\$ 15.00	184.0	hours	\$ 2,760.00
Laborer	\$ 15.00	184.0	hours	\$ 2,760.00
Fringe Benefits				\$9,812.77
Manager	\$5.06	5.0	hours	\$ 25.30
Foreman	\$6.41	160	hours	\$1,025.60
Administration	\$5.83	25.0	hours	\$ 145.75
Operator 1	\$6.31	184.0	hours	\$ 1,161.04
Operator 2	\$6.10	176.0	hours	\$ 1,073.60
Operator 3	\$5.94	176.0	hours	\$ 1,045.44
Truck Driver/laborer	\$6.12	176.0	hours	\$ 1,077.12
Truck Driver 2/laborer	\$2.07	120.0	hours	\$ 248.40
Labor (pipe Layer)/Operator	\$5.80	184.0	hours	\$ 1,067.20
Labor (pipe Layer)	\$5.79	144.0	hours	\$ 833.76
Laborer	\$0.69	140.0	hours	\$ 96.60
Laborer	\$5.47	184.0	hours	\$ 1,006.48
Laborer	\$5.47	184.0	hours	\$ 1,006.48
Use of District-owned Equipment and District purchased supplies				\$37,503.20
Case Backhoe	\$ 36.41	160	hours	\$ 5,825.60
Skid Steer case	\$ 21.37	80	hours	\$ 1,709.60
Cat Excavator	\$ 58.54	176	hours	\$ 10,303.04
Allis Chalmers Fork Lift	\$ 19.70	48	hours	\$ 945.60
PeterBuilt/Trailer	\$ 53.73	32	hours	\$ 1,719.36
GMC Semi/Trailer	\$ 53.73	32	hours	\$ 1,719.36
GMC Dump Truck	\$ 50.67	48	hours	\$ 2,432.16
GMC Dump Truck	\$ 50.67	48	hours	\$ 2,432.16
Cat Dozer D6	\$ 51.44	160	hours	\$ 8,230.40
Roller Packer	\$ 11.88	184	hours	\$ 2,185.92
District Provided supplies				\$ 16,896.25
Gravel	\$ 8.30	450		\$ 3,735.00
Pipe Bedding	\$ 9.95	255		\$ 2,537.25
High Pressure Valves Resilient Wedge	\$ 3,812.00	2		\$ 7,624.00
Contingencies	\$ 3,000.00	1		\$ 3,000.00
Supplies and Materials				\$96,451.83
18" Pipe	\$ 30.12	1800		\$ 54,216.00
15" pipe	\$ 20.83	1800		\$ 37,494.00
18" 90° elbow	\$ 356.94	1		\$ 356.94
18x18x4 tee	\$ 205.79	1		\$ 205.79
18X15 taper	\$ 126.80	1		\$ 126.80
15x15x4 tee	\$ 107.49	2		\$ 214.98
12" 90° elbow	\$ 204.21	3		\$ 612.63
12" 27.5° elbow	\$ 169.82	1		\$ 169.82
4" Air Vent	\$ 111.00	3		\$ 333.00
12" Alfalfa Riser	\$ 260.00	1		\$ 260.00
Gallon of Gray Pipe Glue	\$ 86.27	2		\$ 172.54
Gallon Purple pipe Cleaner	\$ 67.10	2		\$ 134.20
Pipe Lubricant	\$ 51.36	10		\$ 513.60
Valve Wells	\$ 405.40	2		\$ 810.80
Valve Well Lids	\$ 148.20	2		\$ 296.40
Contingencies	\$ 534.33	1		\$ 534.33
Other				\$3,000.00
Environmental compliance/review	\$3,000.00	1		\$ 3,000.00
TOTAL DIRECT COSTS				\$199,437.99
Indirect Costs				
None				\$0.00
TOTAL ESTIMATED PROJECT COSTS				\$199,437.99

Funding Sources	Percent of Total	Total Cost by Source
Recipient Funding	50%	\$99,986.16
Reclamation Funding	50%	\$99,451.83
TOTALS	100%	\$199,437.99

**RESOLUTION FOR WATER AND ENERGY
EFFICIENCY GRANT PROGRAM:
WaterSMART
Small-Scale Water Efficiency Projects FY 2022**

February 1, 2022

WHEREAS, the Belle Fourche Irrigation District in Newell, South Dakota is a legally organized irrigation district in the State of South Dakota, and

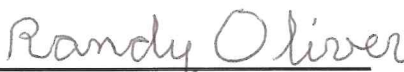
WHEREAS, the District promotes, supports and encourages water conservation, and

WHEREAS, the District urgently needs system improvements to maximize the utilization of a limited water supply and help sustain the viability of the project.

THEREFORE, BE IT RESOLVED that the Board of Directors of the Belle Fourche Irrigation District in South Dakota agrees and authorizes that:

1. The Board has reviewed and supports the application proposal to the WaterSMART: Small-Scale Water Efficiency;
2. The Board authorizes the District Secretary, Tara Tennis, the legal authority to enter into the WaterSMART: Small-Scale Water Efficiency Grants agreement;
3. The Belle Fourche Irrigation District in South Dakota is capable of providing the in-kind services and matching obligations, and
4. If selected for a Small-Scale Water Efficiency Grant, the applicant will work with Reclamation to meet established deadlines for entering into a cooperative agreement.

DATED: 2-1-22


Randy Oliver, Board Chairman

ATTEST:


Tara Tennis, Secretary
